



THE NERDS EXAMINATION SERIES*
P.7 EXAMINATIONS 2024 (SET 5)
MATHEMATICS

Time allowed: 2hours 30minutes

INDEX NO.									
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CANDIDATE'S NAME.....

CANDIDATE'S SIGNATURE DATE

SCHOOL'S EMIS NO.....

DISTRICT NAME

READ THE FOLLOWING INSTRUCTIONS CAREFULLY:

1. This paper has two sections **A** and **B**
2. All the working in both sections **A** and **B** should be shown in the spaces provided
3. All working must be done using blue or black point pen or fountain pen. Diagrams must be drawn in pencil
4. Unnecessary changes of work may lead to loss of marks
5. Any handwriting that cannot be easily read may lead to loss of marks
6. Do not fill in anything indicated for *examiners use only* and those inside the paper

For examiner's use only

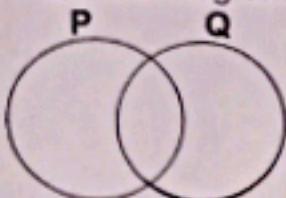
SECTION	MARKS
SECTION A	
SECTION B	
TOTAL	

SECTION A: (40 MARKS)

1. Work out:

$$\begin{array}{r} 4 \ 6 \\ - 2 \ 0 \\ \hline \end{array}$$

2. Shade $P - Q$ in the diagram below.



3. Write 45600 in words.

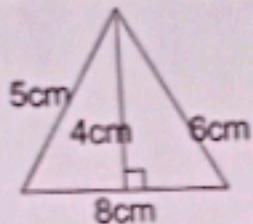
4. Divide 2424 by 6

5. Subtract $\frac{1}{2} - \frac{1}{3}$

6. Given that represents 6 pupils, draw pictures to represent 48 pupils.

7. Simplify: $^6 - ^4$

8. Find the area of the triangle below.



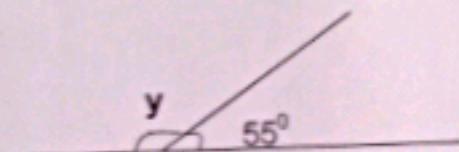
9. What is the next number in the sequence

1, 3, 6, 10, _____?

10. 5 books cost sh. 20000. Find the cost of 7 similar books.

11. Subtract: Hrs Min.
7 30
-4 45

12. Find the size of angle y.



13. Find the GCF of 12 and 20.

14. Express 2.5 km as meters.

15. Find the median of the following numbers.

3, 5, 4, 9, 2, 7, 8

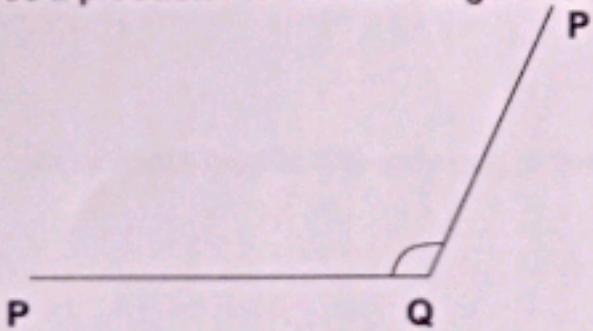
16. Arrange $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ in ascending order.

17. Round off 77.74 to the nearest ones.

18. Set A = {1, 3}. How many subsets are in set A?

19. Solve: $3t + 4 = 10$

20. Use a protractor to measure angle PQR.



SECTION B: 100 Marks

21.

Mosipula bought the following items from the market

3kg of sugar at shs. 35000 per kg
1 ½ litres of milk at shs. 1400 each litre
2 kg of rice at shs. 6400
8 mangoes at shs. 500 per mango

- (a) Calculate his total expenditure.

(4 marks)

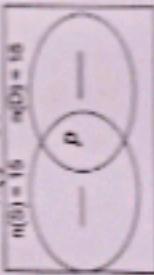
- (b) If he had shs. 25000 at first, find his change.

(2 marks)

22. In a class of 30 pupils, 16 like singing (S), 18 like dancing (D) and 10 like both singing and dancing

- (a) Represent the above information on the Venn diagram.

(2 marks)



- (b) Find the number of pupils who like both activities.

(2 marks)

- (c) How many pupils like only one activity?

(2 marks)

23. In a class of 66 pupils, $\frac{2}{3}$ are girls and the rest are boys.
(a) Find the fraction for boys.

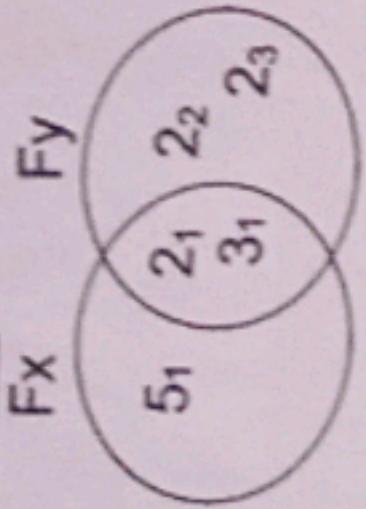
(1 mark)

- (b) How many girls are in the class?
- (1 mark)
- (c) How many more girls than boys are in the class?
- (2 marks)

24. Using a ruler and a pair of compasses only, construct a hexagon in a circle of radius 4cm.

(4 marks)

25. The diagram below shows prime factors of two numbers. Use it to answer the questions below.



(a) Find the value of (i) x (1 mark)

(ii) y (1 mark)

(b) Calculate the
(i) GCF of x and y (1 mark)

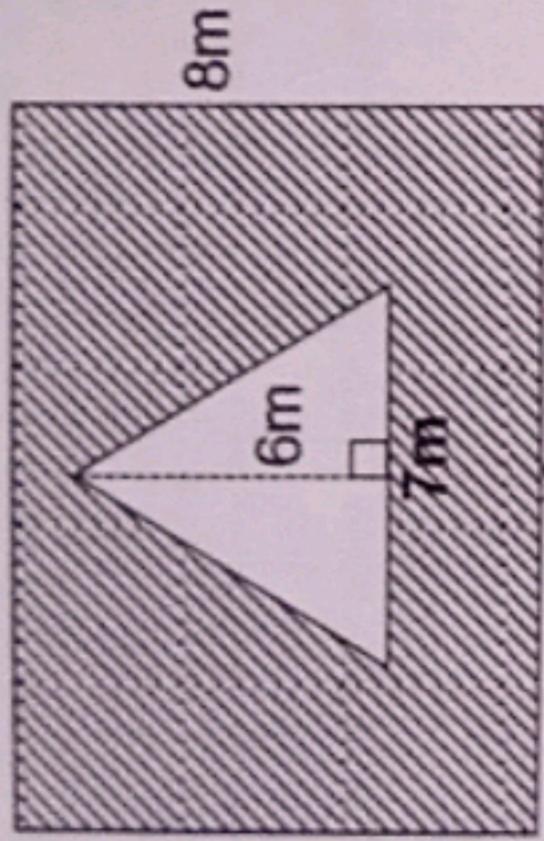
(ii) LCM of x and y (2 marks)

26. (a) If $p = 2$, $r = 3$ and $t = 4$. Find the value of, (1 mark each)

(i) $\frac{rt}{p}$

(ii) $p(r + t)$

(b) Solve: $3n - 2 = 28$ (2 marks)



- (a) Find area of the rectangle.

- (b) Find area of the triangle.

- (c) Find area of the shaded part.

28. Study the magic square below and use it to answer the following questions.

- (a) Find the magic sum.

15	w	11
z	9	x
y	17	3

- (b) Find the value of the unknowns.

- (i) w

- (ii) x

- (iii) y

- (iv) z

- (1 mark)

- (1 mark)

29. Hamza scored the following marks in his end of term one exams.

ENG	MTC	SCE	GEF	H.E
75	50	80	65	75

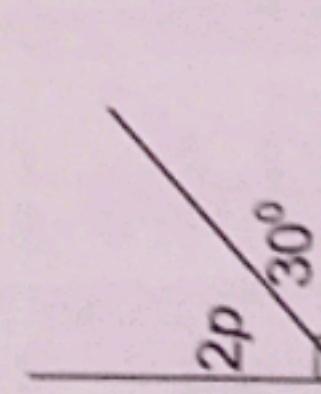
- (a) What was Hamza's modal mark? (1 mark)

- (b) Find his median mark. (1 mark)

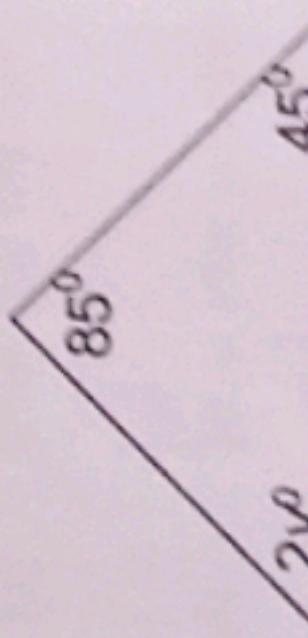
- (c) Calculate his mean mark. (2 marks)

- (d) Find his range. (1 mark)

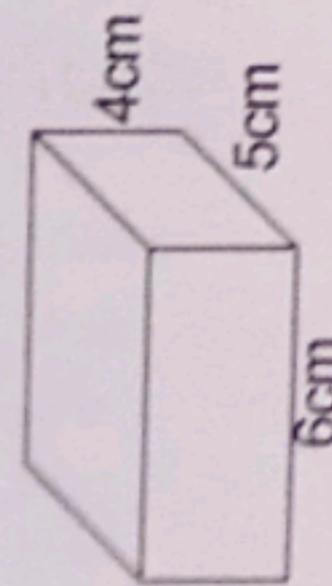
30. (a) Calculate the value of p . (2 marks)



- (b) Find the value of y . (2 marks)



31. Study the figure below and use it to answer the questions that follow.



- A diagram of a rectangular prism. The vertical edge on the left is labeled "4cm". The bottom front horizontal edge is labeled "6cm". The bottom right receding edge is labeled "5cm".

(a) Find the number of;

(i) edges

(ii) faces

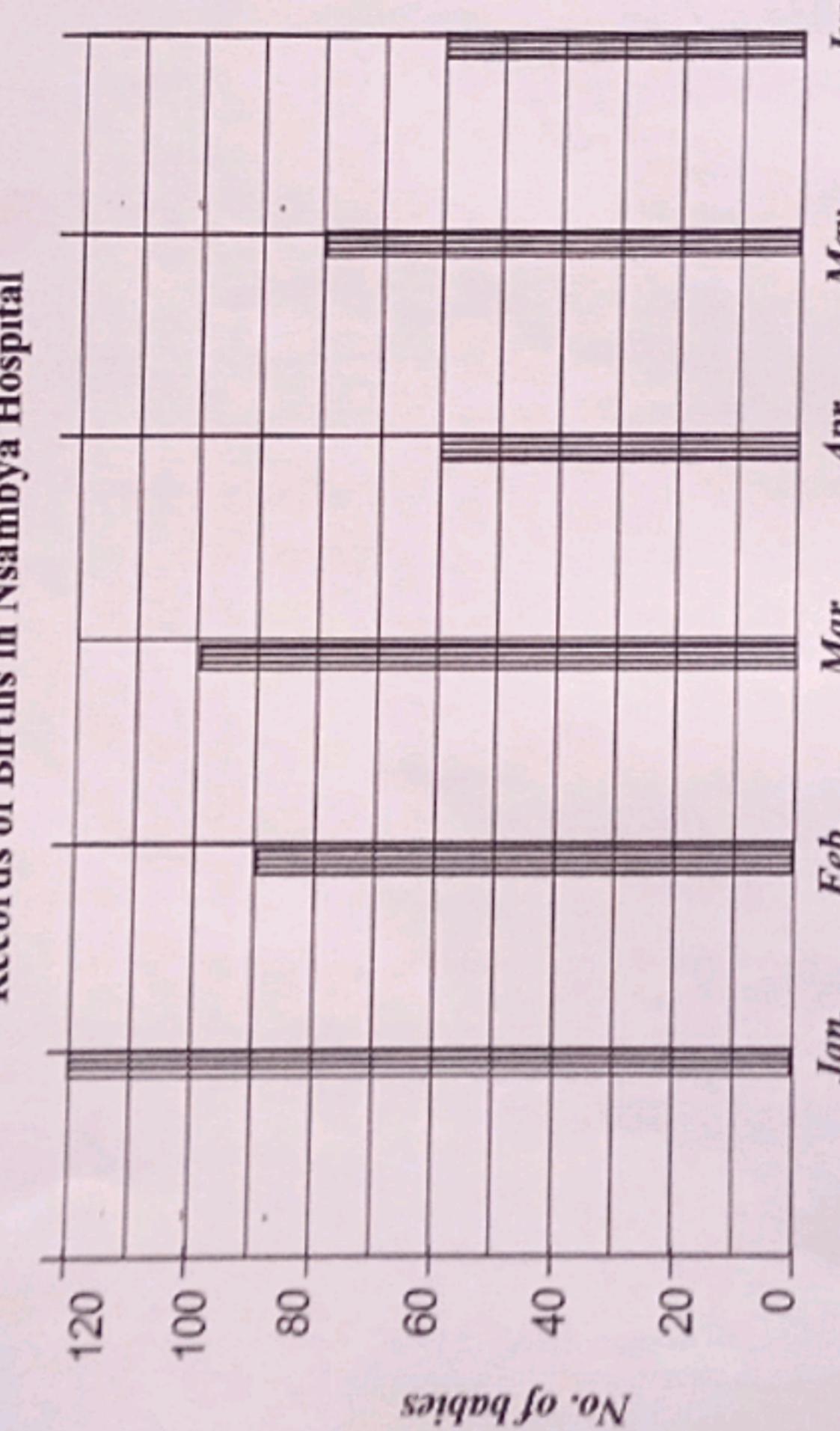
(1 mark each)

(b) Calculate its volume.

(2 marks)

- (c) Find its total surface area

32. Study the graph and answer the questions that follow.
Records of Births in Nantahala High School



- (a) In which month was the highest number of babies born? (1 mark)

(b) Which 2 months had the same number of babies born? (1 mark)

(c) How many babies were born in February? (1 mark)

(d) Which 2 months had a total number of births of 220? (2 marks)